

Steven C. Quay
Application No.: 09/587,116
Page 3

PATENT

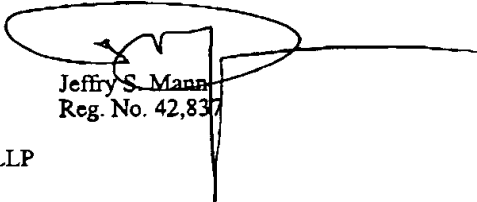
Johnson, 194 USPQ 187 (CCPA 1977). In *Johnson*, the Court held that it was legitimate for an Applicant to amend a claim to remove a disclosed species, thereby claiming less than the full scope of his disclosure, since it is up to the inventor to decide what scope of protection he will seek.

CONCLUSION

In view of the foregoing, Applicants believe all claims now pending in this Application are in condition for allowance. The issuance of a formal Notice of Allowance at an early date is respectfully requested.

If the Examiner believes a telephone conference would expedite prosecution of this application, please telephone the undersigned at 415-576-0200.

Respectfully submitted,

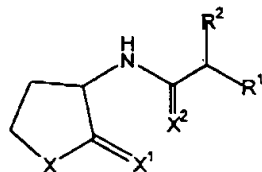


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SF 1294704 v1

VERSION WITH MARKINGS TO SHOW CHANGES MADE

1. (Amended) A compound having the structure:



(I)

wherein,

R¹ is a member selected from —H, —OH, and (=O);

R² is a member selected from [H], reactive functional groups, alkyl groups terminally substituted with a reactive functional group and internally substituted alkyl groups terminally substituted with a reactive functional group;

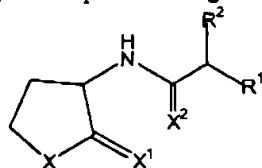
X is a member selected from —O—, —S— and —NH—; and

X¹ and X² are members independently selected from O and S.

CLAIMS 28-108 HAVE BEEN CANCELED.

CLAIMS PENDING AFTER AMENDMENT

1. (Amended) A compound having the structure:



(I)

wherein,

R¹ is a member selected from —H, —OH, and (=O);

R² is a member selected from reactive functional groups, alkyl groups terminally substituted with a reactive functional group and internally

substituted alkyl groups terminally substituted with a reactive functional group;

X is a member selected from —O—, —S— and —NH—; and

X¹ and X² are members independently selected from O and S.

2. The compound according to claim 1, wherein R² is an internally substituted alkyl group terminally substituted with a reactive functional group.

3. The compound according to claim 2, wherein the alkyl group is internally substituted with a functional group that is a member selected from —OH, (—O) and combinations thereof.

4. The compound according to claim 1, wherein the reactive functional group is a member selected from —OR³, —NHR⁴, —COR⁵, —SH and —CH₂X³

wherein,

—OR³ is a member selected from hydroxy, alkyl sulfonate and aryl sulfonate groups;

R⁴ is a member selected from H, C₁-C₆ alkyl, C₁-C₆ substituted alkyl, aryl and substituted aryl groups;

R⁵ is a member selected from H, X³ and —OR⁶, wherein R⁶ a member selected from alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl, heterocyclyl and substituted heterocyclyl groups; and

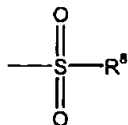
X³ is a halogen.

5. The compound according to claim 1, wherein the compound is a single stereoisomer.

6. The compound according to claim 4, wherein R³ is

Steven C. Quay
Application No.: 09/587,116
Page 6

PATENT



(V)

wherein,

R^8 is a member selected from alkyl, substituted alkyl, aryl and substituted aryl groups.

7. The compound according to claim 1, wherein the alkyl and the internally substituted alkyl groups are members selected from C_1 - C_{20} saturated straight-chain, C_1 - C_{20} saturated branched-chain, C_1 - C_{20} unsaturated straight-chain, C_1 - C_{20} unsaturated branched-chain alkyl and internally substituted alkyl groups.

8. The compound according to claim 7, wherein the alkyl and internally substituted alkyl groups are members selected from C_5 - C_{10} saturated straight-chain, C_5 - C_{10} saturated branched-chain, C_5 - C_{10} unsaturated straight-chain, C_5 - C_{10} unsaturated branched-chain alkyl and internally substituted alkyl groups.

9. A compound according to claim 1, wherein R^2 has the structure:

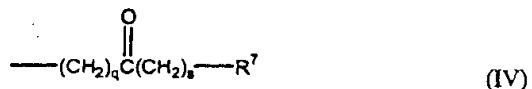


wherein,

R^7 a reactive functional group; and
 n is a number from 1 to 20, inclusive.

10. The compound according to claim 9, wherein n is a number from 2 to 9, inclusive.

11. A compound according to claim 1, wherein R^2 has the structure:



wherein,

R^7 is a reactive functional group; and
 q and s are numbers independently selected from 1 to 20, inclusive.

Steven C. Quay
Application No.: 09/587,116
Page 7

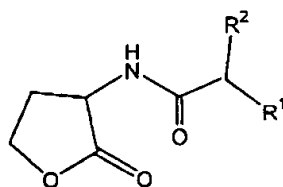
PATENT

12. The compound according to claim 11, wherein s is a number from 2 to 9, inclusive.

13. A pharmaceutical formulation comprising a pharmaceutically acceptable carrier and a compound according to claim 1, said reactive functional group of said compound being covalently bound to a biologically active agent.

14. The pharmaceutical formulation according to claim 13, wherein said biologically active agent is a member selected from antibiotics, immune stimulators and combinations thereof.

15. A compound having the structure:



(II)

wherein,

R¹ is a member selected from H, OH, and (=O); and

R² is a member selected from H, reactive functional groups, alkyl groups terminally substituted with a reactive functional group and internally substituted alkyl groups terminally substituted with a reactive functional group, with the proviso that when R² is —OH, R¹ is a member selected from OH, and (=O).

16. The compound according to claim 15, wherein the reactive functional group is a member selected from —OR³, —NHR⁴, —COR⁵, SH and CH₂X³

wherein,

—OR³ is a member selected from hydroxy, and a species such that —OR³ is a leaving group;

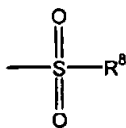
R⁴ is a member selected from H, C₁-C₆ alkyl, C₁-C₆ substituted alkyl, aryl and substituted aryl groups;

Steven C. Quay
Application No.: 09/587,116
Page 8

PATENT

8 R^5 is a member selected from H, halogen and $-OR^6$, wherein R^6 is species
9 such that $-OR^6$ is a leaving group; and
10 X^3 is a halogen.

1 17. The compound according to claim 16, wherein R^3 is



(V)

2
3 wherein,

4 R^8 is a member selected from alkyl, substituted alkyl, aryl and substituted aryl
5 groups.

1 18. The compound according to claim 16, wherein R^6 is a member
2 selected from alkyl, substituted alkyl, aryl, substituted aryl, heteroaryl, substituted heteroaryl,
3 heterocyclyl and substituted heterocyclyl groups.

1 19. The compound according to claim 15, wherein the alkyl and the
2 internally substituted alkyl groups are members selected from C_1 - C_{20} saturated straight-chain,
3 C_1 - C_{20} saturated branched-chain, C_1 - C_{20} unsaturated straight-chain, C_1 - C_{20} unsaturated
4 branched-chain alkyl and internally substituted alkyl groups.

1 20. The compound according to claim 19, wherein the alkyl and internally
2 substituted alkyl groups are members selected from C_5 - C_{10} saturated straight-chain, C_5 - C_{10}
3 saturated branched-chain, C_5 - C_{10} unsaturated straight-chain, C_5 - C_{10} unsaturated branched-
4 chain alkyl and internally substituted alkyl groups.

1 21. A compound according to claim 15, wherein R^2 has the structure:



2
3 wherein,

4 R^7 is a reactive functional group; and
5 n is a number from 1 to 20, inclusive.

Steven C. Quay
Application No.: 09/587,116
Page 9

PATENT

22. The compound according to claim 21, wherein n is a number from 2 to

9, inclusive.

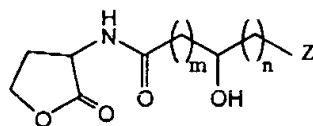
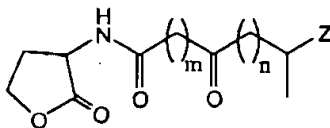
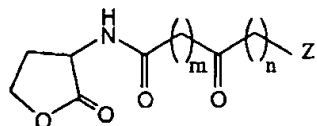
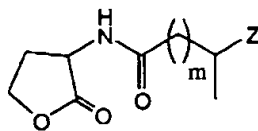
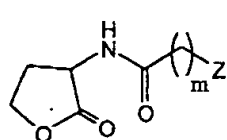
23. The compound according to claim 15, wherein R² is a member

selected from the group consisting of —COOH, —OH, —NH₂, and —SH.

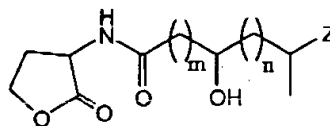
24. The compound according to claim 21, wherein R⁷ is a member selected

from the group consisting of —COOH, —OH, —NH₂, and —SH.

25. A compound having a structure that is a member selected from:



and



wherein,

m is a number selected from 1 to 20, inclusive;

n is a number from 0 to 20, inclusive; and

Z is a reactive functional group.

26. The compound according to claim 25, wherein m and n are numbers

independently selected from 2 to 9, inclusive.

27. The compound according to claim 25, wherein Z is a member selected

from —NH₂, —COOH, —SH, and —OH.

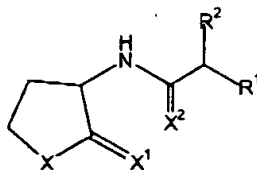
SF 1294704 v1

Steven C. Quay
Application No.: 09/587,116
Page 4

PATENT

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(I)

wherein,

R^1 is a member selected from $-H$, $-OH$, and $(=O)$;

R^2 is a member selected from $[H]$, reactive functional groups, alkyl groups terminally substituted with a reactive functional group and internally substituted alkyl groups terminally substituted with a reactive functional group;

X is a member selected from $-O-$, $-S-$ and $-NH-$; and

X^1 and X^2 are members independently selected from O and S.

CLAIMS 28-108 HAVE BEEN CANCELED.